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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/658,470	09/10/2003	Kouta Fukui	FSF-031461	2212

37398 7590 06/14/2005

TAIYO CORPORATION  
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ARLINGTON, VA 22202

EXAMINER
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CHEA, THORL

ART UNIT	PAPER NUMBER
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1752

DATE MAILED: 06/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/658,470

Applicant(s)

FUKUI, KOUTA

Examiner

Thorl Chea

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 March 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 5-8 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 5-8 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This second office action is responsive to the communication on March 28, 2005; claims 5-8 are pending and claims 1-4, 9 have been canceled.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Fukui et al (US 2002/0102502) and Biegler et al (US Patent No. 5,600,396). Fukui et al discloses the material of the claimed method such as shown in paragraph 4 above, but fails the thermal developing device comprising a filter to collection volatilized substance claimed in the present claimed invention. See Fukui et al on pages 35, [0385] to [0396] wherein the photothermographic material contains an organic compound an amount of 0.05 g/m<sup>2</sup>. The method of developing a photothermographic material by exposing the material to 810 nm diode and heat at temperature of 120 °C for 15 second is disclosed on page 25, [0271] and page 23, [0236]. On page 17, [0185], it is disclosed a coating solution using an aqueous solvent containing 30 % by mass or more of water; the drying process is disclosed on page 25, [0265]. Biegler et al discloses a photothermographic processor equipped with filter housing containing a chemical filtration media used in cleansing the gas stream from the processor. See abstract and column 2, lines 31-48. The processor is also equipped with exposure/development apparatus and shown in column 4, lines 41-48. It would have been obvious to the worker of ordinary skill in

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the art at the time the invention was made to use device taught in Biegler to trap the odor particle in the process for forming an image using a photothermographic material taught in Fuikui et al, and thereby provide an invention as claimed. The limitation such as volatilization remaining ratio of 50 % or more presented in the claimed invention is inherent to the photothermographic composition or the process taught in the prior art after the development.

4. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukui et al (US 2002/0102502) and Biegler et al (US Patent No. 5,600,396) as applied to claim 5 above, and further in view of either Kudo et al (US Patent 6,475,710) or Asanuma et al (US Patent No. 6,146,822). Kubo et al and Asanuma et al discloses the use compound of formula (I) or (II) as to improve storage stability and to enhance the sensitivity and image quality of the photothermographic material. See Asanuma et al in columns 87-98, claims 1-17 and Kudo et al in column 81, claim 1. It would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the compound taught in either Kudo et al or Asanuma et al in the process obtained by the combination of Fukui et al and Biegler et al with an expectation of achieving a process that provide a photothermographic material with improved image storage stability and to enhance the sensitivity and image quality of the photothermographic material, and thereby provide a process as claimed.

#### ***Response to Arguments***

5. Applicant's arguments filed March 28, 2005 have been fully considered but they are not persuasive. The applicants argue that "it has been conventionally known that filter, which include the filter device in Biegler, are used principally for the collection of an organic solvent. Such organic solvents typically remain in coating layers of photothermographic materials

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because they are contained in coating solution for forming coating layers of photothermographic materials. Collection is desirable because of the residual components of the organic solvents are harmful to the human body when they are volatilized during development of the photographic material. In contrast, it has been conventionally known that photothermographic materials that are formed by using water-based coating solution are free from the above-described problem accompanying photothermographic materials that are formed by using organic solvent. Therefore, there would be no motivation to combine the filter taught by Biegler with the disclosure of Fukui, which are formed using water-based coating.”.

The argument is not persuasive. The solvent disclosed in Fukui et al contains 30 % by mass or more of water. Therefore, the organic solvents containing in the aqueous coating solution in Fukui et al is up to 70 %. The filter taught in Biegler is used to remove the material from the vent stream, and some of the removed materials can be condensed after cooling to a temperature below the thermal development temperature and underivable deposit themselves in or on the apparatus. Therefore, it would have been obvious to use the processor equipped with filtration system taught in Biegler to remove underivable removed material containing in the vent stream of the processor. The invention claimed in the present invention is related to the thermal developing device comprising a filter for collecting volatilized substance. The volatilized substance is not stated therein. It would have been understood by the worker of ordinary skill in the art that the additive used in the photothermographic material would be unstable during heating, and it would be obvious to use a filter to collect the undesirable removed substance.

### *Conclusion*

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6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thorl Chea whose telephone number is (571) 272-1328. The examiner can normally be reached on 9 AM-5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly can be reached on (571)272-1526. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Tch *th*  
June 2, 2005

*Thorl Chea*  
Thorl Chea  
Primary Examiner  
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